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10/533,569	03/06/2006	Michiharu Tanaka	Q87581	4470
65565	7590	12/03/2010	EXAMINER	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

**Application No.**

10/533,569

**Applicant(s)**

TANAKA ET AL.

**Examiner**

SPENCER PATTON

**Art Unit**

3664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 October 2010.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-4 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 2-4 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 10/1/2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/22)  
4) ☐ Interview Summary (PTO-413)  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_  
Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

1. The amendments filed 10/1/2010 have been entered. Claims 2-4 are pending.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claim 2 and 3** are rejected under 35 U.S.C. 103(a) as being unpatentable over Young (US Patent No. 2,043,822) in view of McNeil (US Publication No. 2002/0146347) and Johnson (US Patent No. 6,586,905).

Young teaches:

**Re claim 2.** A control apparatus of an automatic machine comprising:

a breaker connected to a power supply (page 2, first column, lines 33-36; source of A.C. current 10),

a driving apparatus configured to supply electric power of the power supply via a relay apparatus connected to the breaker (switch 17),

a current control rectifying element connected to the relay apparatus (arc rectifying tube 20), and

a current controlling device configured to control a rectified current of the current control rectifying element (page 1, second column, line 23 through page 2, first column, line 23), wherein

after the current controlling device reduces a rectified current and stops a power feeding operation using an instruction for turning off the power supply to the driving unit, a contact of the relay apparatus is opened (page 1, second column, line 23 through page 2, first column, line 23).

Young fails to specifically teach: **(re claim 2)** [supplying electric power] to a driving unit of the automatic machine, configured to control the driving apparatus; **(re claim 3)** wherein the control apparatus is a robot control apparatus.

McNeil teaches, at paragraph [0078], a robot which is preferably powered by a power supply, such as the one taught by Young.

In view of McNeil's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the control apparatus as taught by Young, **(re claim 2)** [supplying electric power] to a driving unit of the automatic machine, configured to control the driving apparatus; **(re claim 3)** wherein the control apparatus is a robot control apparatus; since McNeil teaches a robot which is preferably powered by a power supply, such as the one taught by Young.

Young fails to specifically teach: **(re claim 2)** a relay which is opened after a predetermined time.

Young teaches, at page 2, first column, lines 1-23, that the switch must maintain contact with contacts 13 and 16 for 1/120 of a second so that the current is completely quenched through the arc rectifying tube.

Johnson teaches, at column 1, lines 46-64, that time delay relays are a known method of switching for prevention of arcing in circuits.

In view of Johnson's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the control apparatus as taught by Young, **(re claim 2)** a relay which is opened after a predetermined time; since Young teaches that the switch must maintain contact with contacts 13 and 16 for 1/120 of a second so that the current is completely quenched through the arc rectifying tube and Johnson teaches that time delay relays are a known method of achieving this.

4. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Young (US Patent No. 2,043,822) as modified by McNeil (US Publication No. 2002/0146347) and Johnson (US Patent No. 6,586,905) as applied to claim 2 above and further in view of Eminger (US Patent No. 3,578,034).

The teachings of Young as modified by McNeil and Johnson have been discussed above. Young as modified by McNeil and Johnson fails to specifically teach: **(re claim 4)** wherein the relay apparatus is an electromagnetic connector.

Eminger teaches, at column 7, lines 63-75, that time delay relays may comprise electromagnetic connectors.

In view of Eminger's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the control apparatus as taught by Young as modified by McNeil and Johnson, **(re claim 4)** wherein the relay apparatus

is an electromagnetic connector; since Eminger teaches that time delay relays may comprise electromagnetic connectors as the preferred implementation.

### ***Response to Arguments***

5. Applicant's arguments, see page 5, filed 10/1/2010, with respect to the objections to the specification, drawings and claims and the 35 USC 112 rejection of claim 2 have been fully considered and are persuasive. The objections to the specification, drawings and claims and the 35 USC 112 rejection of claim 2 have been withdrawn.

6. Applicant's arguments, see pages 6-7, filed 10/1/2010, with respect to the rejection(s) of claim(s) 2-4 under 35 USC 103 have been fully considered and are persuasive in view of the amendments. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Young as modified by McNeil, Johnson and Eminger.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tanaka (JP 62-201065), as discussed in the International Search Report for this Application, teaches reducing voltage and thus current draw of a PWM AC to DC rectifier (CONV) when the unit is turned off, thus reducing over current and arcing across the switches. Okada (JP 02-217781) teaches reducing the current through a rectifier below an arcing current before opening a switch.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **SPENCER PATTON** whose telephone number is (571)270-5771. The examiner can normally be reached on Monday-Thursday 7:30-5:00; Alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi Tran can be reached on (571)272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SPENCER PATTON/  
Examiner, Art Unit 3664  
/KHOI TRAN/  
Supervisory Patent Examiner, Art Unit 3664